Montana Board of Oil and Gas Conservation

Environmental Assessment

Operator: Continental Resources, Inc.
Well Name/Number: Conaway 1-19H
Location: SE SW Section 19 T25N R57E
County: Richland **, MT; Field (or Wildcat)** W/C (Bakken Horizontal)

Air Quality

(possible concerns)
Long drilling time: No, 30 to 40 days drilling time.
Unusually deep drilling (high horsepower rig): No, triple derrick drilling rig to drill to 20,297'MD/10,375'TVD, single lateral horizontal Bakken Formation well.
Possible H2S gas production: Slight chance H2S gas production.
In/near Class I air quality area: No Class I air quality area.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:
X Air quality permit (AQB review)
X Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: No special concerns – using triple rig to drill to 20,297'MD/10,375'TVD, single lateral horizontal Bakken Formation well.

Water Quality

(possible concerns)
Salt/oil based mud: Yes, freshwater and freshwater mud system on surface hole and oil based invert drilling fluids for intermediate casing hole. Brine water will be used for the horizontal lateral.
High water table: Possible high water table.
Surface drainage leads to live water: No, closest drainage is Main Hay Creek, an ephemeral tributary drainage to First Hay Creek, adjacent to this drainage on the north and northeast from this location.
Water well contamination: No, closest water wells are about ½ of a mile to the east southeast and about 7/8 of a mile to the northwest from this location. Depth of these water wells range from 100' to 220'. Surface hole will be drilled with freshwater and freshwater drilling fluids. Surface casing will be set and cemented to surface from a depth of 1669'.
Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: No Class I stream drainages.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
X Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)

__ Other: _____

Comments: ___1669' of steel surface casing cemented to surface is adequate to protect freshwater zones and cover the Fox Hills aquifer. Due to the location being very close to Main Hay Creek a closed loops mud system will be utilized and a cuttings pit dug and lined in the northwest corner of this location.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: No, stream crossings, crossing only ephemeral drainage of Main Hay Creek, anticipated.

High erosion potential: Yes, small cut, up to 5.5' and small fill, up to 2.1', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: Yes, large 500'X300' location size required.

Damage to improvements: No, slight.

Conflict with existing land use/values: Slight, surface use cultivated land.

Mitigation

__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X_ Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X_ Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
__ Other _____

Comments: Access will use existing county road, #338. About 2641' of new road will be built into location off the existing county road #338. Drill cuttings will be disposed of in the lined cuttings pit in the northwest corner of the location. Oil based invert drilling fluids will be recycled. Completion fluids will be trucked to a commercial Class II disposal. Cuttings pit will be backfilled after remaining fluids have evaporated. No special concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residences are about 7/8 of a mile to the southwest, about 1 mile to the south and about 1.25 miles to the east southeast from this well location.

Possibility of H2S: Slight chance of H2S.

Size of rig/length of drilling time: Triple drilling rig/short 30 to 40 days drilling time

Mitigation:

_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Adequate surface casing and operational BOP equipment will mitigate any issues.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: None in the area.
Threatened or endangered Species: Species identified as threatened by the USFWS are Pallid Sturgeon, Interior Lease Tern, Piping Plover and Whooping Crane. Species listed as candidate species are the Greater Sage Grouse and Sprague's Pipit. NH tracker website for this Township and Range lists only one (1) species of concern as the Whooping Crane.

Mitigation:
__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other:

Comments: Private cultivated surface lands. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites: None identified.

Mitigation
__ avoidance (topographic tolerance, location exception)
__ other agency review (SHPO, DSL, federal agencies)
__ Other:

Comments: On private cultivated surface lands. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)
__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation
Comments: No concerns

Remarks or Special Concerns for this site

Well is a 20,297'MD/10,375'TVD, single lateral horizontal Bakken Formation well.

Summary: Evaluation of Impacts and Cumulative effects

__No long term impacts expected. Some short term surface impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki
(title:) Chief Field Inspector
Date: January 13, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Richland County water wells
(subject discussed)
January 13, 2012
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Richland County
(subject discussed)

January 13, 2012
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T25N R57E
(subject discussed)

January 13, 2012
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _ _____
Others present during inspection: _____